

REMARKS

The present Amendment is in response to the Office Action mailed January 7, 2004 in the above-identified patent application. Enclosed herewith is a Petition requesting a three-month extension of time for resetting the deadline for responding to the Office Action from April 7, 2004, to and including July 7, 2004.

As an initial matter, Applicants acknowledge and appreciate the Examiner's indication that claim 18 is allowed.

The Examiner objected to claim 19 as having a minor informality. In response, claim 19 has been amended to change "first boning pads" to --first bonding pads--.

The Examiner rejected claim 1 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,173,055 to Grabbe. Referring to FIG. 1 thereof, Grabbe discloses an area array connector that includes a conductive sheet 12 having flexible contact elements 10 with resilient contact fingers 18. The resilient contact fingers 18 have first ends permanently attached to the conductive sheet 12 and second free ends that are not in contact with the conductive sheet 12. Referring to FIG. 2, the conductive sheet 10 is laminated to a film 26 having windows 28. After the conductive sheet 10 and the film 26 have been laminated together as shown in FIGS. 3 and 4, the free ends of the contact fingers 18 are flexed upwardly to pass through window 28. Referring to FIG. 6, the laminate 32 of the conductive sheet 12 and the film 26 is attached to circuit board 40 by applying a solder paste 38 over contact pads on the circuit board 40. FIGS. 7 and 8 show the laminate 32 after it has been attached atop circuit board 40 with resilient contact fingers 18 pointing upwardly. Notably, the free or tip ends of the contact fingers 18 are never in contact with the conductive sheet 12, the film 26 or the circuit board 40.

In contrast, the present application discloses a connection component having a plurality of leads with terminal ends permanently connected to a support structure and tip ends releasably attached to the support structure. Referring to FIGS. 1-5 of the present application, dielectric layer 1 has a

top surface 2 including first regions 3 and a second region 4 that lies outside the first regions 3. As shown in FIG. 4, an adhesion promoter 8 is deposited over the first regions 3 of dielectric layer 1. Referring to FIG. 5, leads 7 are formed on the top surface of the dielectric layer 1. Each lead 7 has a terminal end 5 permanently attached to adhesion promoter region 8 and a second tip end 6 spaced from the terminal end. The second tip end 6 is releasably attached to the second region 4 by a release interface 9 (FIG. 2) that is free of the adhesion promoter 8. Thus, the present application discloses a connection component including a plurality of leads having terminal ends that are permanently secured to the connection component and tips ends that are releasably secured to the connection component. In response to the Examiner's §102 (b) rejection, Applicants respectfully assert that claim 1 is unanticipated because Grabbe does not disclose a plurality of leads whereby "a tip end [is] releasably attached to the second region and offset from the terminal end." In addition, Grabbe does not disclose a "plurality of release interfaces, each of said release interfaces being associated with a tip end" of a lead.

The Examiner also rejected claims 5 and 19 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,536,909 to DiStefano. Referring to FIG. 2 thereof, DiStefano discloses a connection component including a supporting structure 30 having a flexible top dielectric layer 32 and a bottom compliant dielectric layer 34. The support structure 30 has four elongated gaps 40 extending from the top surface 36 to the bottom surface 38. The elongated gaps 40 divide support structure 30 into an interior portion 42 and four strip-like outer securement elements 44 disposed outside of the gaps. The connection component also includes leads 56 that extends between the interior portion 42 and the outer elements 44. The leads are not on the top surface 36, but are sandwiched between the top layer 32 and the bottom layer 34. Each lead also includes a frangible section 72. Referring to FIG. 5, the leads 56 may be

detached at the frangible section for being bonded to electrical contacts 102 on a semiconductor chip 98.

In response to the Section 102(b) rejection, Applicants respectfully assert that claim 5 is unanticipated because DiStefano does not teach a connection component with "a plurality of leads disposed on the top surface of said support structure." As shown in FIG. 2 thereof, DiStefano's leads 52, 54 are disposed between top dielectric layer 32 and bottom dielectric layer 34. For all of these reasons, claim 5 is unanticipated and is otherwise allowable.

Claim 19 is unanticipated by DiStefano because the reference does not disclose a connection component including a support structure having a "top surface" with "a plurality of first bonding pads disposed on the top surface" and "a plurality of second bonding pads disposed on the top surface." DiStefano also does not disclose a connection component having "a plurality of leads, wherein each lead has a terminal end permanently connected to one of the plurality of first bonding pads; and a tip end connected to the associated second bonding pad and offset from the terminal end; wherein the permanent connection between the terminal end and the first bonding pad is stronger than the connection between the tip end and the associated second bonding pad."

The Examiner also rejected claims 7, 8 and 13 under 35 U.S.C. § 103(a) as being obvious over DiStefano in view of U.S. Patent 6,110,761 to Ahmad. Referring to FIGS. 3 and 4 thereof, Ahmad teaches applying an adhesive 26 to a downset portion 16 of a lead finger 12 and then attaching the lead finger 12 to a bond pad 28 of a semiconductor die 30. In response to the rejection, Applicants respectfully assert that claim 7 is unobvious because DiStefano and Ahmad neither disclose nor suggest a connection component including "a support structure having a dielectric layer, a plurality of first regions, a second region, and a top surface, wherein the top surface is defined by the plurality of first regions and the second region." Claim 7 is also unobvious because DiStefano and Ahmad neither disclose nor suggest a connection component

including "a plurality of leads disposed on the top surface, each of said leads having a terminal end permanently connected to the second region; and a tip end associated with one of the plurality of first regions, disposed over the associated first region." Claim 7 is also unobvious over DiStefano and Ahmad because the cited references neither disclose nor suggest a connection component including "a plurality of release interfaces, each of said release interfaces corresponding to one of said plurality of leads, located between the tip end of the corresponding lead and the associated first region of said support structure, and formed by depositing a heat susceptible material on each of the plurality of first regions."

In response to the rejection of claim 8, Applicants respectfully assert that the claim is unobvious because DiStefano and Ahmad neither disclose nor suggest a connection component including "a support structure having a dielectric layer, a plurality of first regions, a second region, and a top surface, wherein the top surface is defined by the plurality of first regions and the second region." Claim 8 is also unobvious because DiStefano and Ahmad neither disclose nor suggest a connection component including "a plurality of polymer layers, each of said polymer layers being associated with one of said plurality of first region[s and] a plurality of leads disposed on the top surface, each of said leads having a terminal end permanently connected to the second region; and a tip end associated with one of the plurality of polymer layers, releasably attached to the associated polymer layer, and offset from the terminal end."

Regarding claim 13, Applicants respectfully assert that the claim is unobvious over DiStefano and Ahmad because the references neither disclose nor suggest a connection component including "a support structure having a dielectric layer, a plurality of first regions, a second region, and a top surface, wherein the top surface is defined by the plurality of first regions and the second region." Claim 13 is also unobvious because DiStefano and Ahmad neither disclose nor suggest "a plurality of leads formed on the second region and the plurality

of conductive layers, each of the leads having a terminal end connected to the second region." Claim 13 is also unobvious because DiStefano and Ahmad neither disclose nor suggest "a tip end associated with one of the plurality of conductive layers, connected to the associated conductive layer, offset from the terminal end, and comprised of a second conductive material; wherein the melting point of the second conductive material is higher than the melting point of the first conductive material."

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone Applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: June 14, 2004

Respectfully submitted,

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